

We claim:

1. A method of controlling tractive force of a vehicle comprising:
determining a tractive force request of a driver of the vehicle;
determining an actual tractive force of the vehicle; and
modifying the actual tractive force of the vehicle to be equal to the tractive force request.
2. The method of controlling tractive force of claim 1, wherein:
the step of determining the tractive force request comprises:
measuring an actual speed of the vehicle;
sensing a position of an acceleration pedal;
looking up the tractive force request on a map corresponding to the actual speed and the position of the acceleration pedal.
3. The method of controlling tractive force of claim 1, wherein:
the step of determining the actual tractive force comprises:
modeling the actual tractive force.
4. The method of controlling tractive force of claim 3, wherein:
the step of modeling the actual tractive force comprises:
modeling the actual tractive force as a function of at least one of the following:
vehicle speed, engine speed, engine temperature, transmission temperature and ambient temperature.
5. The method of controlling tractive force of claim 4, wherein:
the tractive force request comprises a request for a percentage of maximum available tractive force of the vehicle.
6. The method of controlling tractive force of claim 5, wherein:

the percentage of available tractive force is negative when the acceleration pedal is not being depressed and the vehicle is moving, thereby decelerating the vehicle.

7. The method of controlling tractive force of claim 6, wherein:
the request for the percentage of available tractive force decreases for a given acceleration pedal position as the speed of the vehicle increases.
8. The method of controlling tractive force of claim 1, wherein:
the tractive force request comprises a request for a percentage of maximum available tractive force of the vehicle.
9. The method of controlling tractive force of claim 8, wherein:
the percentage of available tractive force is negative when the acceleration pedal is not being depressed, thereby decelerating the vehicle when the vehicle has a positive velocity.
10. The method of controlling tractive force of claim 8, wherein:
the request for the percentage of available tractive force decreases for a given acceleration pedal position as the speed of the vehicle increases.
11. The method of controlling tractive force of claim 8, wherein:
the request for the percentage of available tractive force increases as a function of a positive rate of change of the acceleration pedal position.
12. The method of controlling tractive force of claim 8, wherein:
the request for the percentage of available tractive force decreases as a function of a negative rate of change of the acceleration pedal position.
13. A method of controlling tractive force of a vehicle comprising:
measuring an actual speed of the vehicle;
sensing a position of an acceleration pedal;

looking up the tractive force request on a map corresponding to the actual speed and the position of the acceleration pedal;

modeling the actual tractive force of the vehicle;

modifying the actual tractive force of the vehicle to be equal to the tractive force request.

14. The method of controlling tractive force of claim 13, wherein:

the step of modeling the actual tractive force comprises:

modeling the actual tractive force as a function of at least one of the following:

vehicle speed, engine speed, engine temperature, transmission temperature and ambient temperature.

15. The method of controlling tractive force of claim 13, wherein:

the tractive force request comprises a request for a percentage of maximum available tractive force of the vehicle.

16. The method of controlling tractive force of claim 15, wherein:

the percentage of available tractive force is negative when the acceleration pedal is not being depressed and the vehicle is moving, thereby decelerating the vehicle when the vehicle has a positive velocity.

17. The method of controlling tractive force of claim 15, wherein:

the request for the percentage of available tractive force decreases for a given acceleration pedal position as the speed of the vehicle increases.

18. The method of controlling tractive force of claim 15, wherein:

the request for the percentage of available tractive force increases as a function of a positive rate of change of the acceleration pedal position.

19. The method of controlling tractive force of claim 15, wherein:

the request for the percentage of available tractive force decreases as a function of a negative rate of change of the acceleration pedal position.

20. The method of controlling tractive force of claim 19, wherein:

the request for the percentage of available tractive force increases as a function of a positive rate of change of the acceleration pedal position.